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**From:** Lindstrom, Andrew [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=04BF7CF26AA44CE29763FBC1C1B2338E-LINDSTROM, ANDREW]  
**Sent:** 7/6/2016 6:44:47 PM  
**To:** Biales, Adam [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=db4c5362720344acbe5db220fbe410f2-Biales, Adam]  
**CC:** Mark Strynar [Strynar.Mark@epa.gov]  
**Subject:** RE: Solvay Solaxis West Deptford NJ

Adam,

We suggested our willingness to work with NJDEP based on our desire to write up what we learn in a manuscript. NJDEP has many big problems to deal with so they don't often get that chance to document their important findings in peer-reviewed publications – despite the fact that what happens in the state has implications for the entire world.

Our research interests include the following:

Help gather evidence to explore the hypothesis that aerosol emissions are responsible for some of the PFNA contamination observed in the region. Current data are consistent with contamination from aqueous emissions to the Delaware River and its tributaries, but there are also suggestions that other routes may be important. If paired soil and groundwater samples indicate PFNA is also related to stack emissions, this greatly increases the range of potential contamination and the number of people who are currently exposed. Stack emissions have been observed to be important for PFOA in at least one other location, but this would be the first study to suggest that other PFAS may be emitted as aerosols.

While many ground and surface water samples have been collected in support of this investigation so far, the analysis has been confined to quantitation of PFNA alone. This is often the case in these types of studies because the responsible parties want to restrict their potential liability. Our intention is to do nontargeted analysis of the ground water near the plant and downwind to help conclusively establish the PFAS fingerprint associated with these emissions. If this site is similar to others that we have investigated, we anticipate finding a number of previously undescribed PFAS that are specific to the operations at this location.

The results will lead to additional questions such as: are agricultural products impacted by PFNA contamination? Are fisheries affected? Is house dust in the downwind area impacted by elevated PFNA?

Overall I think our interest is to establish a good working relationship with NJDEP and the Region so we can participate in other research opportunities that arise in the future.

Thank you,

Andy

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**From:** Biales, Adam  
**Sent:** Wednesday, July 06, 2016 10:44 AM  
**To:** Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>  
**Subject:** FW: Solvay Solaxis West Deptford NJ

Hey, see below. They have officially asked OW. Just a quick question in regards to what Jennifer mentions below about this being site investigation rather than research. Is there a research question that you would be asking as well? In other words, would you be leveraging this sampling opportunity to address a research question?

Adam Biales, Ph.D.  
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United States Environmental Protection Agency  
26 W. Martin Luther King Dr.  
Mail Stop 591  
Cincinnati, OH 45268  
Office: 513-569-7094  
Mobile: Ex. 6 Personal Privacy (PP)

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**From:** Orme-Zavaleta, Jennifer

**Sent:** Wednesday, July 06, 2016 10:40 AM

**To:** Buckley, Timothy <[Buckley.Timothy@epa.gov](mailto:Buckley.Timothy@epa.gov)>; Stroup, Gene <[Stroup.Gene@epa.gov](mailto:Stroup.Gene@epa.gov)>; Guiseppi-Elie, Annette <[Guiseppi-Elie.Annette@epa.gov](mailto:Guiseppi-Elie.Annette@epa.gov)>; Gillespie, Andrew <[Gillespie.Andrew@epa.gov](mailto:Gillespie.Andrew@epa.gov)>; Kryak, DavidD <[Kryak.Davidd@epa.gov](mailto:Kryak.Davidd@epa.gov)>; Biales, Adam <[Biales.Adam@epa.gov](mailto:Biales.Adam@epa.gov)>

**Subject:** RE: Solvay Solexis West Deptford NJ

Thanks Tim,

Ex. 5 Deliberative Process (DP)

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## **Ex. 5 Deliberative Process (DP)**

Jennifer Orme-Zavaleta, PhD  
Director, National Exposure Research Laboratory  
USEPA Office of Research and Development  
109 TW Alexander Dr MC 305-01  
RTP, NC 27711

Ex. 6 Personal Privacy (PP)  
cell)

[orme-zavaleta.jennifer@epa.gov](mailto:orme-zavaleta.jennifer@epa.gov)

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**From:** Buckley, Timothy

**Sent:** Wednesday, July 06, 2016 10:28 AM

**To:** Orme-Zavaleta, Jennifer <[Orme-Zavaleta.Jennifer@epa.gov](mailto:Orme-Zavaleta.Jennifer@epa.gov)>; Stroup, Gene <[Stroup.Gene@epa.gov](mailto:Stroup.Gene@epa.gov)>; Guiseppi-Elie, Annette <[Guiseppi-Elie.Annette@epa.gov](mailto:Guiseppi-Elie.Annette@epa.gov)>; Gillespie, Andrew <[Gillespie.Andrew@epa.gov](mailto:Gillespie.Andrew@epa.gov)>; Kryak, DavidD <[Kryak.Davidd@epa.gov](mailto:Kryak.Davidd@epa.gov)>; Biales, Adam <[Biales.Adam@epa.gov](mailto:Biales.Adam@epa.gov)>

**Subject:** FW: Solvay Solexis West Deptford NJ

FYI, latest on the Region 2 PFAS request.

Tim

Timothy J. Buckley, PhD  
Director of the Exposure Methods & Measurements Division  
National Exposure Research Laboratory  
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Phone: (919) 541-2454 (O); FAX: -0239

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**From:** Everett, Adolph

**Sent:** Wednesday, July 06, 2016 9:13 AM

**To:** Gaines, Linda <[Gaines.Linda@epa.gov](mailto:Gaines.Linda@epa.gov)>; Buckley, Timothy <[Buckley.Timothy@epa.gov](mailto:Buckley.Timothy@epa.gov)>; Azzam, Nidal <[Azzam.Nidal@epa.gov](mailto:Azzam.Nidal@epa.gov)>; Lindstrom, Andrew <[Lindstrom.Andrew@epa.gov](mailto:Lindstrom.Andrew@epa.gov)>

**Cc:** Schuver, Henry <[Schuver.Henry@epa.gov](mailto:Schuver.Henry@epa.gov)>; Fitz-James, Schatzi <[Fitz-James.Schatzi@epa.gov](mailto:Fitz-James.Schatzi@epa.gov)>; Scozzafava, MichaelE <[Scozzafava.MichaelE@epa.gov](mailto:Scozzafava.MichaelE@epa.gov)>; Filippelli, John <[Filippelli.John@epa.gov](mailto:Filippelli.John@epa.gov)>; Iglesias, Ariel <[Iglesias.Ariel@epa.gov](mailto:Iglesias.Ariel@epa.gov)>

**Subject:** RE: Solvay Solexis West Deptford NJ

Linda,

Your summary captured the essential points of the matter. In case you don't have it, I've attached NJDEP's request to my Director, John Filippelli, which John relayed to ORD-NERL via memo to Dr. Buckley. I suggest that we try to have a conference call as soon as possible, during which we can provide any additional information needed. It's Region 2's preference to have NJDEP participate on the call. Thanks.

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**From:** Gaines, Linda

**Sent:** Tuesday, July 05, 2016 4:47 PM

**To:** Buckley, Timothy <[Buckley.Timothy@epa.gov](mailto:Buckley.Timothy@epa.gov)>; Azzam, Nidal <[Azzam.Nidal@epa.gov](mailto:Azzam.Nidal@epa.gov)>; Lindstrom, Andrew <[Lindstrom.Andrew@epa.gov](mailto:Lindstrom.Andrew@epa.gov)>

**Cc:** Everett, Adolph <[Everett.Adolph@epa.gov](mailto:Everett.Adolph@epa.gov)>; Schuver, Henry <[Schuver.Henry@epa.gov](mailto:Schuver.Henry@epa.gov)>; Fitz-James, Schatzi <[Fitz-James.Schatzi@epa.gov](mailto:Fitz-James.Schatzi@epa.gov)>; Scozzafava, MichaelE <[Scozzafava.MichaelE@epa.gov](mailto:Scozzafava.MichaelE@epa.gov)>

**Subject:** Solvay Solexis West Deptford NJ

Andy and Nidal,

After speaking to both of you, I would like to confirm that I understood the situation with the Solvay Solexis site in West Deptford NJ. My understanding is that NJDEP has asked EPA's help in characterizing the PFNA contamination at this site. Also, my understanding is that Region 2 would like to help with the characterization, and that Region 2 would like ORD's help in this characterization. Further, my understanding is that ORD would like to help NJDEP at this site. Am I correct that this is a RCRA site, but that the investigation is state led by NJDEP? It is also my understanding that PFNA was known to have been discharged via wastewater to the Delaware River, but it is suspected that it might have also been discharged via stacks in an air plume. Further, NJDEP plans to sample in the next couple of weeks as they have permission now to sample at the site. Also, New Jersey has set an interim threshold for PFNA for 10 ng/L in drinking water. If any of these statements are incorrect, could you please correct me?

We have set up a consultation process within OLEM at the directive of the OLEM AA for any PFAS site. It is not clear to me that a state led site that ORD would be aiding in would actually be subject to this consultation process. However, if I understand the situation correctly, could either ORD or Region 2 please send me a summary of the involvement and any formal request made by NJDEP about this EPA involvement? Since it appears there is a short time frame, I would like to make sure if an OLEM consultation is needed that we get it done as soon as possible, so a decision can be made about EPA's involvement at this site.

Thank you,  
Linda

Linda G.T. Gaines, Ph.D., P.E.  
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